

## APPENDIX

### **GLOSSARY OF TERMS**

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**Abiotic** – any factor in the environment that is non-living (soil, weather, water)

**Accretion** – the increase of land by the action of natural forces

**Amphipods** – a group of small, laterally-compressed crustaceans

**Anadromous** – fish that live in the ocean and enter rivers and streams to spawn (salmon, alewives, shad)

**Anoxic** – relating to or marked by a severe deficiency of oxygen

**Anthropogenic** – human-induced (impacts)

**Baseline data** – basic information gathered before a program or activity begins, to be used later to provide a comparison for assessing impacts; the primary line, the one from which others are measured; often considered the natural state of a system

**Bathymetry** – the measurement of ocean depth

**Benthos/benthic** – the community of bottom-dwelling life (e.g. mussels)

**Bioassay** – appraisal of the biological activity of a substance by testing its effect on an organism and comparing the result with some agreed standard

**Biodiversity** – the variety of living organisms considered at all levels, from genetics through species, to higher taxonomic levels, and including the variety of habitats and ecosystems

**Biogenous sediment** – the type of sediment that is made up of the skeletons and shells of marine organisms

**Biogeochemical cycle** – a circuit where a nutrient moves back and forth between both biotic and abiotic components of ecosystems

**Biomass** – the total mass of a defined organism or group of organisms in a particular community or an ecosystem as a whole

**Bycatch** – the harvest of organisms other than the species for which the fishing gear was set; also called incidental catch

**Carapace** – the shield-like structure that covers the anterior portion of some crustaceans

**Catch** – the total number or poundage of fish captured from an area over some period of time; includes fish that are caught but released or discarded instead of being landed; may not necessarily be brought ashore (landed)

**Catch per unit effort (CPUE)** – the number of fish caught by an amount of effort; typically a combination of gear type, gear size, length of time gear is used

**Charter boat** – a boat available for hire, normally by a group of people for a short period of time

**Cohort** – a group of organisms spawned during a given period, usually within a year

**Crustacean** – class of animals that typically live in water and are characterized by jointed legs, segmented bodies, and hard external skeletons (e.g. crabs, lobster, shrimp)

**Cryptic species** – distinct species that show little or no outward morphological differences, and thus are difficult to distinguish

**Cumulative impact** – the combined outcome of numerous actions and stresses, where a group of relatively minor impacts may add up to severe habitat degradation or loss

**Decapod** – a group of crustaceans with five pairs of walking legs and a well-developed carapace

**Demersal** – organisms that live on or near the bottom

**Depuration** – purification (shellfish)

**Dissolved oxygen** – oxygen that is dissolved in water

**Easement** – the privilege of using something that is not your own (as using another's land as a right of way to your own land); also covers “natural derivatives” of public rights of fishing, fowling and navigation, and the right to pass freely over any inter-tidal areas in order to engage in such an activity

**Ecosystem based management (EBM)** – integrates knowledge of ecological interrelationships to manage impacts within an ecosystem; effective implementation of EBM should: (1) consider ecological processes that operate both inside and outside ecosystem boundaries, (2) recognize the importance of species and habitat diversity, and (3) accommodate human uses and associated benefits within the context of conservation requirements.

**Effort** – the amount of time and fishing power used to harvest fish; fishing power can include gear size, boat size and horsepower

**Embayment** – a bay; an indentation of a shoreline larger than a cove but smaller than a gulf

**Epibiota** – organisms living on the seafloor surface; organisms that attach to other organisms (e.g. barnacles or kelp attached to mussel shells)

**Essential fish habitat (EFH)** – a designation by the National Marine Fisheries Service for all federally-managed fishery species; 'those waters and substrate necessary for spawning, breeding, feeding, or growth to maturity', as defined by NMFS

**Estuary** – a semi-enclosed body of water with an open connection to the sea that is measurably diluted by freshwater drainage

**Eutrophication** – nutrient over-enrichment

**Federal consistency review** – authority of MCZM to review and approve federal activities in the Massachusetts coastal zone to ensure that federal actions are consistent with CZM program policies and meet state standards. Includes any coastal project that requires a federal license, is implemented by a federal agency, or is carried out with federal funds

**Federal waters** – generally waters from 3- 200 miles offshore

**Fishery** – all of the activities involved in catching a species of fish or group of species; one or more stocks of fish which can be treated as a unit for purposes of conservation and management and which are identified on the basis of geographical, scientific, technical, recreational and economic characteristics

**Fishery dependent data** – data collected on a fish or fishery from sport fishermen, commercial fishermen, and seafood dealers

**Fishery resource** – any fishery, any stock of fish, any species of fish (commercial and non-commercial species), any prey species, and any habitat of fish; all the living and nonliving resources, substrate and ecological systems which fish species need to survive

**Fisheries independent data** – data collected on a fish by scientist who catch the fish themselves, rather than depending on fishermen and seafood dealers

**Fishing mortality** – a measurement of the rate of removal of fish from a population by fishing; “annual”- percentage dying in one year, “instantaneous”- percentage dying at any one time

**Fork length** – the length of a fish as measured from the tip of its snout to the fork in the tail

**Fouling organisms** – organisms that live attached to human-made surfaces such as boats and pilings (e.g. bryozoans, sponges)

**Geographic Information Systems (GIS)** – a computerized system of organizing and analyzing any spatial array of data

**Greenhouse effect** – the increase in the earth’s temperatures that results from the presence of carbon dioxide and other heat-trapping gases in the atmosphere

**Habitat** – the type of environment in which an organism or group of species normally lives or occurs

**Hypoxia** – a deficiency in oxygen

**Incidental catch** – See Bycatch.

**Infauna** – the animals that burrow in the substrate (e.g. polychaetes, small bivalves)

**Juvenile** – an organism that has not yet reached sexual maturity

**Landings** – the number or poundage of fish unloaded at a dock by commercial fishermen or brought to shore by recreational fishermen for personal use; reported at the points which fish are brought to shore (not necessarily areas where caught)

**Littoral** – the zone between the highest and lowest spring-tide shorelines; the inter-tidal zone

**Marine invasive species** – or aquatic nuisance species, are non-native plants and animals are transported into and throughout Massachusetts via commercial shipping, as fouling organisms on recreational boats, through the release of unwanted aquarium contents, or a variety of other human related transport vectors; have great potential for rapid colonization and are already having significant impacts on the biodiversity and integrity of aquatic habitats

**Marine protected area** – any area of the marine environment that has been reserved by federal, state, territorial, tribal or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein (as defined by Executive Order 13158; May 26, 2000, Federal Register)

**Metadata** – summary data providing content, quality, types and spatial information about a data set; used in GIS mapping and other applications

**Nearshore** – referring to shallow waters close to the coast

**Neonate** – a newborn

**Neritic** – the pelagic environment above the continental shelf

**Offshore** – referring to deeper waters far from the coast

**Opportunistic species** – species which have short life spans, the ability to reproduce quickly in large numbers and have generalized environmental requirements

**Ova** – eggs

**Oviparous** – an animal that releases eggs

**Paralytic shellfish poisoning** – a condition caused when humans eat shellfish that have become contaminated with the toxin present in the dinoflagellates that cause red tides

**Parturition** – birth

**Pelagic** – organisms that inhabit the water column/open sea, and spend relatively little time on the sea bottom (e.g. tuna, some sharks, jellies, plankton)

**Perturbation** – the disturbance of the quality of natural resources caused by human activity/use or natural processes

**Phytoplankton** – the photosynthetic, plantlike plankton

**Plankton** – the plants and animals that are found drifting in the water

**Recruitment** – the measure of the number of organisms that enter a class during some time period, such as the spawning class or fishing-size class

**Relative abundance** – an index of fish population abundance used to compare fish populations from year to year; doesn't measure actual numbers of fish, but shows population changes over time

**Remote sensing** – any technique for analyzing landscape patterns and trends using low altitude aerial photography or satellite imagery; any environmental measurement that is done at a distance

**Seining/seine** – a large fishnet that hangs vertically, with floats at the top and weights at the bottom, that will enclose fish when it is pulled in

**Sessile** – permanently attached to the substrate and not free to move about (e.g. adult barnacles, bryozoans)

**Species richness** – number of species in a region, site or sample

**State waters** – generally extending from coastline to 3 nautical miles offshore, with the exception of areas within Massachusetts Bay, Cape Cod Bay and Nantucket Sound that extend further due to bay closure lines established by the U.S. Supreme Court

**Stock assessment** – an estimation of the amount or abundance of the resource, an estimation of the rate at which it is being removed due to harvesting and other causes, and one or more reference levels of harvesting rate and/or abundance at which the stock can maintain itself in the long-term

**Strata/stratum** – geographic zones

**Stratified mean weight** – unit of measurement for trawl surveys (per tow)

**Submerged lands** – tidelands lying seaward of the low water mark; under state jurisdiction

**Substrate** – the type of bottom or material on or in which an organism lives

**Synergistic interaction** – an interaction that has more than additive effects, such as the joint toxicity of two compounds being greater than their combined, independent toxicities

**Taxon/taxa** – a group of organisms that share a common ancestry

**Temporal** – of or relating to time as distinguished from space

**Territorial waters** – state waters extending from the shoreline to 3 miles offshore, except for Massachusetts Bay and Cape Cod Bay

**Topography** – the configuration of a surface area including its relative elevations and the position of its natural features

**Trophic level** – a nourishment level in a food web; plants and other primary producers constitute the lowest level, followed by herbivores and a series of carnivores at higher levels.

**Turbidity** – the amount of particulate matter suspended in water

**Wetland** – *coastal*– any bank, marsh, swamp, meadow, flat or other lowland subject to tidal action or coastal storm flowage; *freshwater*- where groundwater, flowing or standing surface water or ice provide a significant part of supporting substrate for a plant community for a lease 5 months out of the year

**Year-class** – the fish spawned and hatched in a given year, a “generation” of fish

**Young-of-the-year (YOY)** – fish that are less than one year old; born during the spawning season

**Zooplankton** – the heterotrophic, animal component of plankton

**These definitions have been adapted from the following sources:**

Castro, P. and M. Huber. 1992. Marine Biology. Mosby Year Book: St.Louis.;  
Massachusetts Department of Environmental Protection  
<http://www.state.ma.us/dep/dephome.htm>.

Division of Wetlands. Department of Environmental Quality Engineering. 1978. A Guide to the Coastal Wetlands Regulations of the Massachusetts Wetlands Protection Act.

Executive Order 13158. May 26, 2000. Federal Register.

Massachusetts Marine Fisheries Advisory Commission/ Massachusetts Division of Marine Fisheries. March 1982. Massachusetts Marine Fisheries Management Policy Report.

Meffe, G. and C. Carroll. 1994. Principles of Conservation Biology. Sinauer Associates, Inc: Sunderland

National Oceanic and Atmospheric Administration. (NOAA) <http://www.noaa.gov>

Thurman, H. 1990. Essentials of Oceanography- Fourth Edition. Macmillian Publishing Company: New York

U.S. Department of Commerce. National Marine Fisheries Service. December 1996. Magnuson-Stevens Fishery Conservation and Management Act. NOAA Technical Memorandum NMFS-F/SPO-23.

Wallace, R., Hosking, W. and S. Szedlmayer. Fisheries Management for Fishermen: A manual for helping fishermen understand the federal management process. Auburn University Marine Extension & Research Center- Sea Grant Extension; Coastal Zone Management Office.

## **TASK FORCE MEETING SCHEDULE**

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This is a comprehensive list of all meetings of the full Task Force. Please note, additional meetings of several work groups occurred between September 2003 – February 2004.

June 17, 2003, 1 PM – 4:30 PM, Mariner's House, Boston

July 30-31, 2003, 9 AM – 5 PM, John Joseph Moakley Courthouse, One Courthouse Way, Boston

September 5, 2003, 9:30 AM – 5 PM, Essex Conference Center and Retreat, Essex

September 15, 2003, 10 AM – 2 PM, Coastal Zone Management Offices, 251 Causeway Street, Suite 800, Boston

October 17, 2003, 9 AM – 3 PM, New England Aquarium Education Center, Central Wharf, Boston

November 24, 2003, 10 AM – 3 PM, Woods Hole Oceanographic Institution, Clark Lab, Room 522, Quissett Campus, Woods Hole

December 19, 2003, 10 AM – 1 PM, Fort Taber, New Bedford

January 27, 2004, 9:30 AM – 2:30 PM, Division of Marine Fisheries Annisquam Lab, Gloucester

February 12, 2004, 9 AM – 12 PM, U.S. Environmental Protection Agency, One Congress Street, Boston

February 26, 2004, 10 AM – 3 PM, Children's Museum of Boston

### **Public Information Meetings**

Boston

December 10, 3 PM - 5 PM, John Joseph Moakley Courthouse, 1 Courthouse Way

Worcester

December 10, 7 PM - 9 PM, Broad Meadow Brook, 414 Massasoit Road

Yarmouth

December 11, 7 PM - 9 PM, Yarmouth Council on Aging, 528 Forest Road

New Bedford

December 15, 7 PM - 9 PM, New Bedford Public Library, 613 Pleasant Street

Gloucester

December 15, 7 PM - 9 PM, Cape Ann Historical Association, 27 Pleasant Street



## LIST OF PUBLIC COMMENTERS

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Public comments were submitted by the following list of individuals by name and town, where this information was provided. All comment letters are available for review at <http://www.state.ma.us/czm/MOMI/commentsrec.htm>

<b>Name/Position</b>	<b>Affiliation/Location</b>
Jan Smith, Director	Massachusetts Bays Program
Eric Chivian, M.D., Director	Center for Health and the Global Environment, Harvard Medical School
Jessica Almy, Wildlife Advocate	Human Society of the United States Cape Wildlife Center
David Bergeron	Massachusetts Fishermen's Partnership
Gib Chase	U.S. Fish and Wildlife Service
George M. Woodwell	Woods Hole, MA
David H. Owen	Rochester, MA
Michael B. Jacobs, Treasurer	HullCARES
Mark Weissman	Mashpee, MA
Robert O'Leary, State Senator	Cape and Islands District
Peter R. Borrelli, Executive Director	Center for Coastal Studies
Maria Marasco, Esq.	Andover, MA and South Yarmouth, MA
Susan L. Nickerson, Executive Director	Alliance to Protect Nantucket Sound
Cindy Lowry, Director	Oceans Public Trust Initiative
John Darwin	Fairhaven, MA
Gerard Dhooge, President	Boston and New England Maritime Trades Council, AFL-CIO
Dennis J. Duffy, VP of Regulatory Affairs	Cape Wind
Robert J. Gough, Director, and Barbara Warren, Program Director	Salem Sound Coastwatch
Don C. Hayward	Monument Beach, MA
John Brierley	
Captain David DeCastro	Pembroke, MA
Robert Bartolini	Franklin, MA
Rodger Ballou	
Tom King	Scituate, MA
Harry Cockran, Berl Hartman	
Myron Kassaraba, Daniel Goldman, and Christopher Kaneb, Co-founders	E2 New England
William Eddy	Falmouth, MA
Captain Tom Deprsia, President	Stellwagen Bank Charterboat Association
Captain Mike Sosik, President	Northeast Charter Captains Association
Fara Courtney	Good Harbor Consulting
Bruce Humphrey	BioAquamatics
Cara Metz, St. Historic Preservation Ofcr.	Massachusetts Historical Commission
David Begelfer, Chief Executive Officer	National Association of Industrial and Office Properties
John Pollock	Dedham, MA
Joseph Kwasnik, VP- Environment	National Grid

<b>Name/Position</b>	<b>Affiliation/Location</b>
Gouldston and Storrs, Peter. D. Corbett, Attny.	New England Development and Nantucket Boat Basin LLC
Robert H. Russell	Strategic Environmental Consulting
Jay M. Cashman, Chairman of the Board	Cashman Constructors
Jonathan G. Davis, Chief Executive Officer	The Davis Companies
Margaret Rowland	
Walter Thompson	
John Cregan	Nantucket, MA
Robert diCurcio	Nantucket, MA
Steve Hirsch	
Martin Lempres	Wellesley, MA
J. Turner	
John Paone	Mashpee, MA
Captain Nola Assad	USCG, OUPV, Yarmouthport, MA
Ailibali	New Seabury, MA
Anne and James Lagrippe	New Seabury, MA
Richard Ulian	Coituit, MA
Erin Madden	Hyannis, MA
Leon Mir	Chestnut Hill, MA
Janet Lloyd	Cambridge, MA
David Bullock	
C. Richardson	
David Robinson	N. Andover, MA
Sheridan Carey	Westwood, MA
Tim Albright	
Auntieshrew	
Paul and Katie Wylie	Hyannis, MA
Roger Stoll	
Lee Hayes	
Townsend Hornor	
Richard Roach	U.S. Army Corps of Engineers
Iain McGill	Quincy, MA
Peter Beves	Holbrook, MA
Catherine Greenleaf	Vineyard Haven, MA
William F. Dubiel	Osterville, MA
Richard Mullin	South Dennis, MA
Jeanine Bandiero	
Milton Thomas	
Richard and Phyllis Campobello	Osterville, MA
James Curtis	Edgartown, MA
Mike McCaffery	
Maureen Darling	
David Breski	Marstons Mills, MA
Jim Ferry	
Laura Caruso	Billerica, MA
C. Frances	
Pricilla R. and Joseph L. Lucier	Osterville, MA
Bruce May	Middleboro, MA

<b>Name/Position</b>	<b>Affiliation/Location</b>
Jane K. Bright and Lori Ehrlich (on behalf of) Adam R. Hundley, Attorney	HealthLink Board of Directors Winn Development Company, Noodle Island Limited Partnership
John Binienda, Chairman, and Daniel Bosley, Chairman	Joint Committees on Energy and Government Regulations Mansfield, MA
Patrick Tiberio Julius Marcus Wendy K. Northross, CEO Patrick J. Hester, VP, General Counsel Michael J. Doebley, Deputy Dir. for Gov't Afs. Jim Klocke, Executive VP Mike Flaherty, Vice President, and Patrick Paquette, Gov't Affairs Liaison Neal Costello, General Counsel	Cape Cod Chamber and CVB Duke Energy Gas Transmission-East Recreational Fishing Alliance Greater Boston Chamber of Commerce  Massachusetts Striped Bass Association Competitive Power Coalition of New England, Inc. Clean Power Now Association to Preserve Cape Cod Department of Conservation and Recreation Marblehead, MA Centerville, MA Coalition for Buzzards Bay Georgetown, MA Osterville, MA U.S. Department of Energy Boston Regional Office
James E. Liedell, Operations Director Maggie Geist, Executive Director Nancy A. Thornton, Dir. of Waterways Samuel J. Bennett Alice Mark Rasmussen, Executive Director Charles T. Casella Carl Redfield Albert H. Benson	The Ocean Conservancy Clean Power Now and Cape Clean Air Mattapoissett, MA Massachusetts Chapter of the Sierra Club The Northeast Seafood Coalition Massachusetts Lobstermen's Association Bridgewater, MA Board of Underwater Archaeological Resources
John C. Phillips, New England Reg. Director Charles W. Kleekamp, Info. Dir, VP Gene Soccolich Mary Ann Nelson, Chair Jacqueline Odell, Executive Director Bernie Feeney, President Peter Murray Victor T. Mastone, Director	

**Form letter—Comments received from several fishing organizations/individuals interested in fisheries resources:**

Robert Baranek, President, MSBA, Weymouth; Mike Flaherty, Quincy; Merrill C. True, Jr. Freetown; Daniel Berkman, Boston; Peter Murray, President, Massachusetts Beach Buggy Association, Bridgewater; Joe McCabe, Scituate; Van Christie, Quincy; Donald W. Shaw, Burlington; Captain Michael F. Sosik, Jr., Northeast Charter Services, Inc., Sturbridge; Glenn Drabik; George A. Lemieux, Jr., Bradford; Captain Dave Auger, Harpoonist Fishing Charters, Newburyport; Mike Delzingo, Arlington; Matthew Moses, Dedham; Julianne R. Silvis, Quincy; William E. Bryant, Quincy; Willy Goldsmith; Michael J. Bucko, Bucko's Parts + Tackle, Fall River; Cheryl Flaherty; Jim Taniyama, South Kingstown, RI; Tom Sousa; Dan Dennehy, Quincy; Chuck Morrison, Marshfield; Scott Gray; Captain Robert McCue, President, Bounty Hunter Sport Fishing, Inc.; Wallace Moore, Needham; Barbara Moore, Needham; Matthew Moore, Needham; Michelle Moore, Needham; Kristen Moore, Needham; Erin Moore,

Needham; Edward E. Miller, Plympton.; Scott West, Duxbury; Captain Debbie DePeperisia, Marshfield; Dennis Hogan, Jamaica Plain; Michael C. Sawyer, Plymouth; John Donovan, Shrewsbury; Vincent Kelleher, Rockland; John Comeau; David Brite; Steven E. James, President, Boston Big Game Fishing Club, Marshfield; Luke Cantella, Plymouth; George Turner, Easton; Elden Ip, Pembroke; Jarrod Morrison, Marshfield; John Fitzgerald; Peter Asiaf; Captain Dave Waldrip, Nautical Adventure Charters, Rockland; Bruce A. Bornstein; Jeffrey Bolster; Frank O'Rourke; East Bridgewater; Michael W. McGuigan, Shirley, NY; Michael A. Doto, Medford; Harris A. Tracy, Stoughton; Toby Scott-Lapinski, South Hadley; Richard C. Kozlowski, North Reading; William N. Hovanasian, Salem; Steven Cannizzo, Dartmouth; David Kupfrian, Tewksbury; David Duffy, Gloucester; Dave Barrett, Tyngsboro; Michael F. Elrick, Plymouth; Rick Elrick, Quincy; Matthew Baer, Elmwood Park, NJ; Steve Connors.

**Form letter—Comments received from citizens of the Commonwealth concerned with the current state and future health of Massachusetts ocean life:**

Ann Gleason, Boston; Theodore Field, Osterville; Jan Oleson, Watertown; William Galli, North Adams; Carol Nealy, Monson; Kenneth Bozek, South Hadley; Nanette Oggiono, Upton; C. Lee, Roxbury; Ruth Clarke-Smith, Hudson; Joy Chambers, Shrewsbury; Haidee LeClair, Berlin; Gail Herath-Veiby, Westborough; Ellen Podolsky, Medford; Robert Miller, Winthrop; Judy Desreuisseau, Gill; Christine Caramanica, Peabody; Jerry Vinal, Whitman; Audrey Higbee, Granby; Sherry Weiland, Arlington; Deborah Hastings, Pittsfield; Dierdre Millman, Hudson; Philip F. Tomlinson, Jr., Greenfield; Patricia J. Jennings, Winchester; Timothy O'Neil, Maynard; Jessica Babineau-Dupont, Fitchburg; Karin Statkum, Quincy; Matt Fitzgibbons, Auburn; Donald Blickens, Sagamore Beach; Brenna Hughes, Marshfield; Katherine Lester, Eastham; Juanita Martinez, Springfield; Katharine Madjid, Cambridge; Phyllis Troia, Plymouth; Christine Caton-McGill, Quincy; Stephen Donnelly, Easthampton; Annie Laurie, Dracut; Carol Carson, Middleborough; Cathy Gardner, Kingston; Hal Fales, Leeds; Patricia Panitz, Centerville; Atin Garg, Lexington; Cynthia Lovell, Charlestown; E. Smith, Beverly; John O'Brien, Chelsea; Alison McCabe, Cambridge; Carl Macrae, South Yarmouth; Martha Olver, Amherst; Eileen Tennant, Arlington; Laura Monti, Chicopee; Martha Leahy, Winchester; Barbara Brown, Lakeville; Jim Crowley, Cambridge; Fred Pomerantz, Sheffield; Dr. Lenny Cavallaro, Ipswich; Chris Buelow, Hardwick; Andrew Levin, Wellesley; Sara Genthner, Easthampton; Cynthia Chapman, Scituate; Catherine Clark, Orleans; Katie Mae Simpson, Malden; Stacey Rossi, North Adams; Judith Embry, Florida; Kit Hoffmann, Randolph; Holiday Houck, Boston; Nathaniel Bellinger, Jamaica Plain; Arline Heimert, Winchester; Julia Max, Newton; Annett Albert, Revere; Karen Ziomek Vayda, Easthampton; Jason Roberts, Somerville; Richard Tonachel, Cambridge; Jill Connor, Medford; Laurie Williams, Wareham; Alan Papsun, South Egremont; Bethany Silveira, Clinton; Jenn Farnum, Greenfield; Elizabeth Way, Upton; L. Gols, Natick; Janice Edwards, Milton; Ann Hunt, Hinsdale; Patricia Titterington, Northampton; Nicole Macguire, Malden; Trinity Peacock-Broyles, Jamaica Plain; Andrew Stahl, Wayland; Marian Kelner, Greenfield; Mary-Alice R. Austin, Belchertown; Courtney Newman, Dedham; Margaret Rydant, Northborough; Amanda Thomas, Chicopee; Keith Morehouse, Falmouth; Suzanne LeMieux, Springfield; Regan Maund, Arlington; Jaremy Lynch, North Easton; Brent Hymer, Burlington; Chris Tarr, Monson; Julianne Rovello, Medford; Carrie Gilbert, Springfield; Renee Holesovsky, Amherst; Chelsea Bouchard-Harnish, East Falmouth, Janet Erickson, Wellfleet; Jeffrey Laurie, Tyngsboro; Catherine Fidalgo, New Bedford; Kristen Paiva, Stoneham; Donna Hampson, Ayer; Jesse Kaminsky, Brighton; Amy Tatem, Salem; Judith Auerbach, Winthrop; Carol Vivori, North Adams; Jeffrey W. Jones, Northampton; Mark Knowles, Rehobeth; Alex Weiland, Arlington; Tom Abbe, Newton; Eleanor MacLellan, Chestnut Hill; Rachel Willman, Norfolk; Amelia Scarpa, Peabody; Bruce Drucker, South Wellfleet; Katharine O'Donnell, Quincy; Robbi Laak, North Grafton; Michael Wallace, Abington; Fritz Bosch, Medford; Cheryl Vallone, Ashland; Karissa Bernardo, Hudson; Melanie Mahin, Arlington; David Goodman, Malden; Justin Balch, Cambridge; Sally Elliott, Dighton; Cindy Warner, Greenfield; Gail Cavanaugh, Weymouth; Kaisa Koponen; Diane Down, Foxboro; David Tavilla, Somerville; Barbara Birdsey, West Barnstable; Dough Shohan, Lee; Cynthia Bradford, Marlborough; Mary Madden, Boston; Kristine Acevedo, Revere; Bethany Silveira, Clinton; Bruce Cohen, Millbury; Tracy Thrasher Hybl, Nahant; Jenny Jones, Natick;

Jaimie Golec, Florence; Heather Walleston, Allston; Robert Mast, Concord; Elisabeth Stoeckel, Boston; Christina Dropo, Weymouth; Tanya Anderson, Cambridge; Jeff Migdow, Lenox; Jamie Shohan, Lee; Erin Abrams, Sturbridge; Paul Bernstein, South Lawrence.

**Form letter—Comments received from the Alliance to Protect Nantucket Sound**

Anne Hart, Worcester; Karim Basta; Keith Bernard; Molly Herod, Richardson, TX; Todd Adelman, Newton; Emily George, Richardson, TX; Bill Varga, Cotuit; J. Bruce Gabriel, Marlborough; Tangley DeLaney, Hyannis Port; Brian J. Hawkesworth, Secretary, Dennis, Waterways Commission, Dennis; Jackie Connor; Peter and Patricia Ward; Richard Brand, Hyannis Port; Judith Brand, Hyannis Port; Dan and Maria Gallagher, West Simsbury, CT.

## SUMMARY OF IMPLEMENTATION PLAN RESPONSIBILITIES TO AGENCIES

### GOVERNANCE

Recommendation	Description	Implementation
Comprehensive Ocean Resources Management Act (CORMA)	The Secretary of Environmental Affairs should introduce legislation for a new, comprehensive Ocean Resource Management Act	<ul style="list-style-type: none"> <li>• The Secretary should convene an inter-agency working group to draft legislative language for a new Ocean Resource Management Act, and to begin to work with interested groups and the legislature to shape a legislative package for the Act.</li> <li>• We do not recommend that any moratoriums be imposed during the pendency of this process.</li> <li>• We do, however, recommend that the state move expeditiously to draft, enact and implement a new Act and prepare the subsequent plans so that they can play the important roles in the future that we envision for the protection and appropriate use of the state's ocean resources.</li> </ul>
Ocean Management Coordination	The Commonwealth should actively promote federal/regional/state cooperative ecosystem management	<ul style="list-style-type: none"> <li>• EOEa should proactively continue to expand these frameworks and review and amend its enforceable coastal policies with assistance and approval of federal partners.</li> </ul>
Climate Change Plans	The Commonwealth's Climate Change Action Plan should include actions relating to effects of climate change on our coasts and oceans	<ul style="list-style-type: none"> <li>• The Secretary should ensure that ocean issues are well represented in the state's climate change action planning efforts and should task CZM with participating in Plan development and implementation as it affects coastal and ocean issues as well as coordination with similar federal initiatives.</li> </ul>
Ocean Sanctuary Act Revisions	The regulations implementing the Ocean Sanctuaries Act (OSA) (302 CMR 5.00) should be updated	<ul style="list-style-type: none"> <li>• The Secretary should convene a workgroup to develop recommended revisions to existing OSA regulations. Specific issues to address include, but are not limited to, clarification of the Public Necessity and Convenience Test for the purposes of considering whether to allow certain development projects within the ocean sanctuaries, the definition of and standards relating to "significant alteration," and the development of guidance or standards relating to aesthetic impacts.</li> <li>• As a subset of the workgroup process, an interagency workgroup should be convened to draft a Memorandum of Understanding that specifies and formalizes the roles and responsibilities of agencies that participate in OSA implementation.</li> <li>• This workgroup process should keep up-to-date on the status of enactment of a new Ocean Resources Management Act, in order to assure that the drafting of such legislation incorporates and addresses the types of protections set forth in the OSA, and then also provides for the elimination of the OSA upon enactment of such an Ocean Resources Management Act with such provisions.</li> </ul>

## MANAGEMENT TOOLS

<b>Recommendation</b>	<b>Description</b>	<b>Implementation</b>
Fee structures	Current Chapter 91 license fees in offshore waters—should be examined and adjusted (i.e., increased or decreased) where appropriate	<ul style="list-style-type: none"> <li>• The Commonwealth should undertake a study to research “best practices” in Massachusetts and other jurisdictions relating to the setting of fees in other policy areas (not necessarily having to do with the oceans, but in areas where a fee is designed to reflect “non-market” values associated with permitted or licensed development activities on a public resources (e.g. the radio spectrum, grazing fees, offshore oil royalties)).</li> <li>• The Commonwealth should convene a working group to advise DEP on options for setting Chapter 91 fees, including through obtaining public comment on a specific set of proposed fees.</li> <li>• The working group should define and map the proposed area to be subject to a revised Chapter 91 fee structure.</li> </ul>
Marine Protected Areas	The Secretary of Environmental Affairs should convene a working group to develop recommendations regarding the designation of Marine Protected Areas	<ul style="list-style-type: none"> <li>• The Secretary should establish an interagency working group, composed of the relevant state and federal agencies, co-chaired by DMF and CZM, and with input from a stakeholder advisory group.</li> </ul>
Coordination of Mitigation	Interagency coordination of project mitigation should be improved	<ul style="list-style-type: none"> <li>• The Secretary, through the MEPA director, should designate a lead agency staff person whose responsibility would be to ensure that permitting and resource management agencies coordinate their actions and requirements, and that the MEPA process reflects the concerns of the permitting and reviewing agencies.</li> <li>• Development of a restoration priority list should be undertaken by EOEA in consultation with appropriate permitting and reviewing agencies.</li> </ul>
Enforcement	Enforcement of existing environmental laws should be a high priority	<ul style="list-style-type: none"> <li>• Once the list of priority projects is developed, the state agencies with enforcement authority should seek to tie implementation of projects on the list to their enforcement actions. For example, implementation could be mandated through the process of developing Consent Orders.</li> </ul>
Visual, cultural, and aesthetic impacts	Methodologies and standards for the analysis of visual, cultural, and aesthetic impacts of proposed projects in state waters should be developed	<ul style="list-style-type: none"> <li>• The Secretary should appoint an interagency work group to develop standards for visual, cultural, and aesthetic impacts for adoption by the relevant agencies.</li> <li>• To initiate this project, EOEA should task an intern with undertaking a literature search on this topic to reveal what approaches are being used in different areas.</li> </ul>
Use Characterization	Inventories of the uses and resources of the state’s marine waters should be developed.	<ul style="list-style-type: none"> <li>• A working group representing state and federal agencies, non-governmental organizations, commercial and recreational fisheries, maritime industries, energy, recreational boating, homeland security, defense agencies, and GIS systems and products should be created.</li> <li>• This working group should establish standards for use characterization, obtain relevant use information, determine how best to represent and display the information, and ensure its dissemination among the public. This work group should work closely with area resource data specialists.</li> </ul>

## **SCIENTIFIC UNDERSTANDING**

<b>Recommendation</b>	<b>Description</b>	<b>Implementation</b>
Marine and Ocean Resource Trends Advisory Group	An advisory group of marine and fishery scientists should be appointed to advise the state	<ul style="list-style-type: none"> <li>• An advisory group should be appointed to outline the scope of this recommendation, including identifying priority species and habitats and appropriate temporal baseline levels.</li> <li>• At the completion of each historical trends analysis, the advisory group should prepare a report that explains the trends analysis process and provides guidance for how marine resource managers should use the information.</li> </ul>
Ocean monitoring and research	A comprehensive ocean resources monitoring and research plan should be developed	<ul style="list-style-type: none"> <li>• A working group, comprised of state and federal agencies, non-governmental organizations, fishery representatives, and public interest groups, should be established and tasked with outlining the components of a comprehensive monitoring and research plan for the Commonwealth of Massachusetts.</li> <li>• The work group should summarize existing monitoring programs, evaluate effectiveness of current monitoring, and recommend improvements to statewide monitoring.</li> </ul>
Seafloor Mapping	The Commonwealth should acquire seafloor maps	<ul style="list-style-type: none"> <li>• Development of a strategic plan to obtain seafloor habitat maps should be led by the existing (informal) Interagency Marine Habitat Working Group organized by CZM, with involvement from federal and state agencies, non-governmental organizations, researchers, and fishermen.</li> </ul>
Standardized Protocols for Data Collection	Standards should be developed for monitoring data submitted by project proponents	<ul style="list-style-type: none"> <li>• An inter-agency group composed of environmental agencies should be tasked with developing standardized data collection protocols, to the maximum extent possible. Additionally, an interagency work group should evaluate on-going monitoring programs and periodically make needed changes to these programs.</li> </ul>



## **OUTREACH**

<b>Recommendation</b>	<b>Description</b>	<b>Implementation</b>
Ocean Literacy and Stewardship	The Secretary should commit to developing a new ocean literacy and stewardship ethic among all citizens of Massachusetts	<ul style="list-style-type: none"> <li>• The Task Force recommends that the Secretary of Environmental Affairs immediately launch a school-based Ocean Education project as a part of the Ocean Management Initiative.</li> <li>• The Secretary should expand her existing Ocean Education Working Group to include key ocean education programs and participants such as the Department of Education. The group should develop a strategic plan to coordinate the existing programs, expand programs to underserved communities, establish linkages between science and education programs, ensure that targeted outreach is undertaken and identify resources necessary to implement the plan.</li> <li>• An advisory group should be assembled to fully explore options and guide the creation of a sustainable broader outreach plan. The outreach plan should draw upon, and complement, local, regional, national efforts to improve ocean literacy. The advisory group should represent broad interests, cutting across traditional sectors.</li> </ul>
Dissemination of ocean resource data	Public dissemination of certain data collected on the Commonwealth's resources, should be increased	<ul style="list-style-type: none"> <li>• To fully realize the value of ocean resources data collected in Massachusetts and to insure appropriate application of these data to ocean resources management, a thorough list of data sets needs to be compiled and organized.</li> <li>• Agencies that collect substantial volumes of data, manage projects that generate data, review permit-related data and provide state-issued scientific permits used to generate data should be responsible for supplying such data to a statewide index.</li> </ul>